Reimagining Instructional Leadership and Organizational Conditions for Improvement: Applied Research Transforming Early Education

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Please see the second paper in this series, "Job-Embedded Professional Learning Essential to Improving Teaching and Learning in Early Education," for a comprehensive look at the Ounce approach to strengthening organizational conditions essential to the continuous improvement of teaching and learning.

Despite concerted efforts to improve children's learning by improving classrooms, results have been lackluster. There is a growing understanding that a sole focus on teachers and classrooms is insufficient. Yet, the field has not systematically explored how to help early childhood education settings become organizations designed for powerful learning and sustained improvement. Recognizing that leaders are the driver of organizational change, we designed and implemented a professional development intervention that cultivated instructional leadership and instilled cultures of collaboration that successfully impacted teaching and children's learning.

Overview

Improving young children's learning outcomes and increasing the quality of early childhood programs demands an evolved and shared understanding of instructional improvement that is based on the evidence of what actually improves teaching and learning. To that end, we conceptualized, implemented, and evaluated a radically different approach to professional development. Our approach taught program administrators how to strengthen their organizations to better generate continuous professional learning and improvement. Its key premise is that instructional improvement flows from strong organizational conditions that support teachers and the work of teaching and learning. The health and strength of those conditions is the responsibility of the program leader. Program leaders shape teaching through day-to-day practices of instructional leadership and drive continuous improvement by facilitating routine teacher collaboration and practice improvement. Cultivating those leadership competencies with early childhood program leaders requires embarking with them on a professional development journey that transforms not only their knowledge and skills but also their conceptualization of their role and understanding of leadership.

While the need for increasing early childhood program quality is well documented, few if any improvement efforts have focused so deeply or systematically on leaders and leadership. Stagnant child-learning outcomes are often attributed to low-quality teaching, prompting interventions designed to improve teachers' instructional skills. Those efforts have not perceptibly moved the needle on instructional quality, let alone overall program quality. Despite significant federal, state, and local investments to expand access and improve quality, the early education field remains underwhelmed by children's learning outcomes and disappointed by the pace and impact of quality improvement efforts.

Taking a different approach, we turned to research in adjacent fields, looking closely at the organizational attributes that are demonstrated drivers of improvement in schools. In that body of knowledge, we gained a deeper understanding of why interventions aimed solely at teachers are unlikely to succeed: organizational conditions and characteristics are far greater determinants of improvement than are the skills and characteristics of teachers alone, and those conditions are largely determined by the school's leader. We concluded that teachers weren't going to thrive and children's outcomes weren't going to improve unless we built more-effective organizations for teaching by developing more-effective leaders and instilling cultures of collaboration.

Confident that taking a systems approach was imperative, we set about molding the school-improvement research into an early childhood professional development intervention (PDI) that simultaneously grew the knowledge of teachers and leaders, and changed organization-wide practices toward those that spur continuous improvement. All of the knowledge and competencies were inspired by an existing research-based framework of organizational supports for improvement called the five essential supports.[1] We not only adapted the definitions to reflect early

childhood settings, we created a comprehensive implementation framework and corresponding professional development modules that articulate a road map for instructional leadership that strengthens the conditions for teaching and learning. Aiming for such ambitious scope and pace of change with early childhood settings and workforce required a dramatic expansion in the role of leadership. Our approach was bold and unprecedented.

This paper focuses on our work with early childhood program leaders (see page 10 for a description of the PDI). It details why program leaders must become instructional leaders and critical partners in teachers' daily professional development; what we drew from established bodies of research to specify the foundational knowledge and competencies of instructional leadership and instructional improvement; how we implemented our leadership development framework; and what we learned about the power and promise of our approach for transforming early education settings into organizations that support powerful learning and sustained improvement.

The Problem:
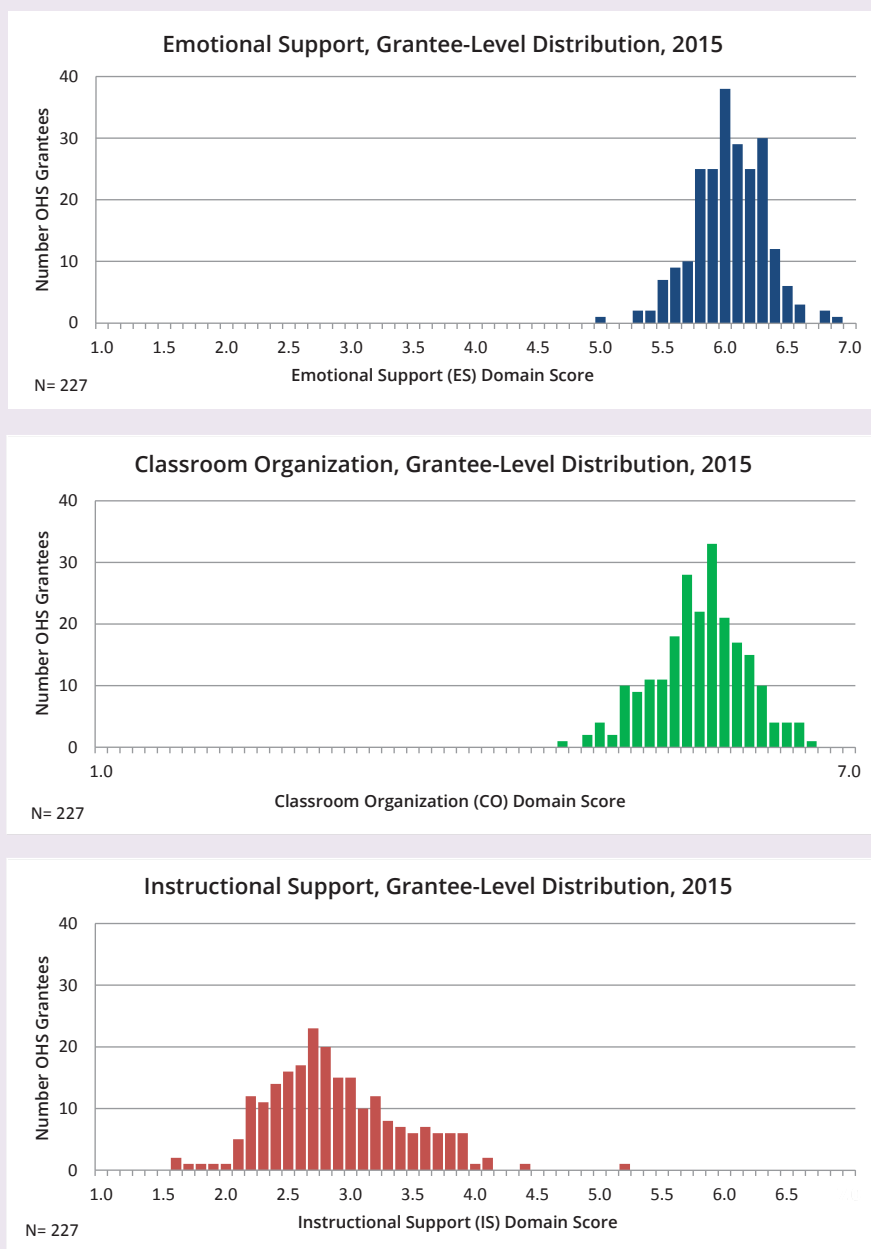# Too Little Achievement, Too Little Change

The great emphasis on early education in the United States is supported by evidence that low-income, high-needs children enter kindergarten significantly behind their better-resourced peers, and that gaps in early academic skills continue to persist or even widen into the elementary years.[2] For example, national data from the Early Childhood Longitudinal Study-Kindergarten Cohort found a difference of one full standard deviation (or 15 standard score points) in literacy and mathematics between children from low- and high-income backgrounds at the beginning of kindergarten.[3] In addition, children from lower-resourced families commonly have yet to develop age-expected self-regulation and social-emotional skills necessary for navigating K-3 classrooms, which may limit their capacity for learning in these environments.[4]

A substantial body of research suggests that high-quality preschool can help to narrow these gaps.[5] Historically, intensive programs, including Perry Preschool, Abecedarian and Child-Parent Centers, showed long-term benefits for participating children.[6] More recently, state-funded pre-k programs in locations such as Boston, Oklahoma, New Jersey, and Tennessee show evidence that they improve cognitive outcomes for low-income, high-needs children by as much as one-third to three-quarters of a standard deviation compared to similar children in control groups.[7] Often, these programs use research-based curricula and provide teachers with ongoing coaching supports.[8] Because of this, they are considered to be high quality, well implemented and able to positively impact children's early achievement and kindergarten readiness.[9]

This evidence has garnered high levels of bipartisan political support and significant funding in most states to increase investments to expand early education programming, develop systems of program standards and monitoring to guide improvement in early education settings, and increase professional development (PD) opportunities for early childhood professionals.[10] While individual programs have shown promise, high-quality instruction does not currently exist across programs at scale.[11]

In recent years, the most common tool used to measure classroom interactions among teachers and students has been the Classroom Assessment Scoring System (CLASS, Pre-K[12]). The CLASS assesses teacher-child interaction quality in three domains; emotional support, classroom organization, and instructional support. The CLASS is scored on a 7-point scale, with scores of 1-2 considered low quality supports, scores of 3-5 mid-quality supports, and scores of 6-7 high quality supports. Observations from publicly funded programs across the country indicate that although teachers provide high-quality emotional and classroom organizational supports to children, the quality of instructional supports is too low to impact children's learning (see Figure 1).[13] For example, CLASS–Pre-K observations conducted by the Office of Head Start (OHS) in 2015 found that typical Head Start classrooms across the country scored an average of 6.03 on emotional support and 5.80 on classroom organization.[14] In contrast, those same classrooms scored an average of 2.88 on instructional support—squarely in the "low quality" range.

FIGURE 1
Distribution of CLASS–PreK Scores Across Head Start Grantees in 2015–16 (n=227 grantees)

Emotional Support, Grantee-Level Distribution, 2015

N= 227

Classroom Organization, Grantee-Level Distribution, 2015

N= 227

Instructional Support, Grantee-Level Distribution, 2015

N= 227

Office of Head Start, Administration for Children and Families (2015). 2015 Head Start grantee-level data from the Classroom Assessment Scoring System (CLASS®). Washington, DC: Author. Retrieved from https://eclkc.ohs.acf.hhs.gov/hslc/data/class-reports/class-data-2015.html

And, as displayed in Figure 2, these low-quality scores on instructional support have been similar year after year, with averages of 2.90 in 2014 and 2.72 in 2013. This indicates that preschool classrooms are repeatedly displaying teacher-child interactions that contain too little concept-development support, instructional feedback, and advanced language modeling to impact children's readiness for kindergarten.[15] Indeed, the ongoing weakness in instructional support is evident in the continuing achievement gap that exists when high-needs children enter kindergarten.[16]

FIGURE 2

Distribution of CLASS–Pre-K Scores Across Head Start Grantees in 2014 (n=404 grantees) and 2013 (n=359 grantees)

Instructional Support, Grantee-Level Distribution, 2014

N=404

Instructional Support, Grantee-Level Distribution, 2013

N=359

Office of Head Start, Administration for Children and Families (2013). 2013 Head Start grantee-level data from the Classroom Assessment Scoring System (CLASS®). Washington, DC: Author. Retrieved from https://eclkc.ohs.acf.hhs.gov/hslc/data/class-reports/docs/national-class-2013-data.pdf

Office of Head Start, Administration for Children and Families (2014). 2014 Head Start grantee-level data from the Classroom Assessment Scoring System (CLASS®). Washington, DC: Author. Retrieved from https://eclkc.ohs.acf.hhs.gov/hslc/data/class-reports/class-data-2014.html

Recently, federal Head Start accountability structures have incorporated standards and evidence criteria for teacher-child interactions as a critical element, as have some state accountability structures that historically focused on more-structural elements of quality.[17] Training and technical assistance purveyors and program leaders have been incentivized to target classroom-level elements of quality for improvement and have been slow to pivot to a focus on teacher-child interactions.[18] Indeed, improvement in instructional supports remains stagnant at scale.[19]

Education levels among early childhood educators are the lowest across all sectors of American schooling and are mirrored in the lowest compensation rates and highest poverty levels among the country's teachers. High levels of teacher absenteeism, depression, burnout, and turnover are endemic to community-based early education centers and are most pronounced in centers located in underserved and minority communities.

Center directors and program leaders grapple with all of those stressors and challenges, and also shoulder the vast and complicated tasks of program administration. The volume and import of those tasks is amplified by a system in which programs rely on multiple funding streams, each of which demands adherence to its own set of regulations and performance standards. Facing this vast array of regulatory requirements leads to professional cultures of compliance and risk-aversion. For administrators, managing regulatory and quality assessment rules can become a full-time preoccupation, leaving little time for attention to sustain gains made through traditional quality improvement and professional development efforts.[20]

Toward Improvement:
Analyzing Findings From Adjacent Fields

Implementation science and school-improvement research has greatly advanced understanding of the drivers of implementation and the dynamics of instructional improvement. Importantly, this research pushes us to consider factors influencing implementation and improvement that are beyond classroom-level processes.

Classrooms do not exist in isolation from their organization; thus, classroom processes do not occur in isolation from those organizational processes. What happens in classrooms is influenced by the conditions under which teachers engage with their curriculum, with each other, with their supervisor, and with children and families.[21] Implementation science has identified three aspects of program infrastructure—competency development, data use and leadership—that act as key drivers of high-fidelity implementation. Successful implementation of complex, evidence-based practices and models requires leaders who ensure staff have the required competencies to do the specified practices, who monitor implementation by collecting and using data to make adjustments to implementation, and who establish or adapt systems to align with the specified practices.[22]

Five Essential Supports, Driven by Leadership

Further, groundbreaking longitudinal research on school improvement by the University of Chicago Consortium on School Research has distinguished features of elementary schools that improved over time from those that failed to show significant improvements in student achievement and that stagnated.[23] These researchers found that high-quality teaching and sustained student engagement within the classroom depends in large measure on whether leadership and staff engage in a culture of ongoing support and development. They concluded that improving schools requires coherent, orchestrated action across the following five components of school organization: effective leadership, collaborative

teachers, involved families, supportive environments and ambitious instruction (see Figure 3).[24] Attending to these organization-level dimensions was shown to enhance the day-to-day work of teachers, improving classroom instruction in sustained ways that lead to better student outcomes. Schools strong in most of these five essentials were ten times more likely to realize improvements in elementary students' math and reading outcomes than were schools weak in three or more of these essentials. Furthermore, they found that a sustained weakness in any one of the essentials undermined virtually all attempts at improving student learning; that is, it reduced the likelihood of improvement to less than 10 percent.

FIGURE 3
The 5 Essential Supports

Effective Leaders

Collaborative Teachers

Ambitious Instruction

Supportive Environment

Involved Families

UChicago Impact

In addition, these researchers found a critical interplay between two types of leadership: facilitative and instructional. Facilitative leadership provides staff with social and emotional supports that increase relational trust and commitment to the school's vision for

excellent and impactful work. Instructional leadership provides staff with coherent instructional guidance, curriculum alignment, and a supportive and collaborative professional work environment focused on ambitious teaching and learning. These researchers found that in improving schools, leaders "encouraged the broad involvement of their staff in reform as they sought to guide and coordinate this activity by means of a coherent vision that integrated the diverse and multiple changes which were occurring."[25] Making sure teachers feel encouraged and supported emotionally, all while providing consistent and coherent instructional guidance, was identified as a strategic focus of leaders in schools with improving performance. Indeed, these researchers state they are unable to point to a single case of sustained school improvement where local leadership remained chronically weak.

Highly effective leaders influence children's achievement primarily through learning how to transform working relations among adult professionals.

The connection between instructional leadership and children's achievement thus hinges on a large number of school processes (e.g., curriculum coordination, professional collaboration) and intermediate outcomes, such as a unity of purpose among staff, high teacher expectations, family involvement, and a climate focused on effective instruction and supportive interactions. The effectiveness of those school processes is the responsibility of administrators. Schools that improve student achievement are more likely to have principals who strategically hire, professionally support, and thoughtfully retain good teachers, in contrast to principals who spend time observing classrooms without using that information to structure professional development.[26] Instead, principals in high-performing schools facilitate strong professional community and regular cycles of data-based inquiry and collaboration focused on teaching and learning.[27]

A Paradigm Shift for Professional Development

Alongside this emerging focus on leadership as the driver of improvement, a clear paradigm shift has occurred in recognizing ongoing, job-embedded professional learning as the vehicle essential to realizing continuous improvement in the complex work of teachers.[28] Ambitious learning requires high-quality teaching that is simultaneously personalized and precise.[29] Personalization involves understanding and addressing the individual needs of each student as these appear day by day, week by week. Precision consists of meeting these learning needs in a focused, effective way, again as they occur and evolve; timely, on-the-spot precision, not packaged prescription.[30]

These performance expectations of teachers are demanding. Michael Fullan concludes that teachers "cannot possibly" teach ambitiously unless they are deeply immersed in learning every day from their practice, their peers' practice, and children's learning in order to figure out how to improve practice.[31] Highly effective teachers have an understanding of practice that is extremely coherent, comprehensive, and accurate. They have finely tuned instincts and decision-making abilities that come from this deep knowledge and understanding of practice. In contrast to traditional one-off modes of PD, the emerging paradigm is long term, school based, collaborative, focused on students' learning, and linked to curricula. It involves "teachers examining student work, developing assessments … and jointly planning, teaching, and revising lessons."[32] Such job-embedded approaches to professional learning are demanding. They expose gaps in knowledge and competence, challenge personal dispositions, promote distribution of leadership, and disrupt expected organizational patterns in favor of innovation.[33] In addition, they require reconfiguring the school or center master schedule in order to carve out and protect time for teacher collaboration during the workday and week.

Early evidence does suggest that differences in how leaders engage teachers in these efforts has significant impacts on teachers' ability to take up new and progressive instructional and social-emotional

practices.[34] When job-embedded PD opportunities are integrated around protocols of improvement that are shared among teachers and leaders, professional identity benefits and instructional improvement ensues.[35] A common denominator in schools with improving performance is this combination of instructionally focused leadership and the creation of supportive conditions and systems for teachers that allow them to collaboratively build craft and knowledge together, on the school site, based on consistently applied protocols and norms.[36]

What stands out in these improvement science and professional development literatures is a shift from thinking about leadership as compliance management toward a concept that emphasizes leaders' role in facilitating trusting interactions and collaborative, ambitious professional learning for adults. Highly effective leaders influence children's achievement primarily through learning how to transform working relations among adult professionals so that all their activity is galvanized toward improving practice and children's learning.

The Early Childhood Context: Resource and Capacity Hurdles

Little research has focused on the capacity of early education leaders to (a) undertake more organizationally focused and time-intensive models of PD for themselves and staff in resource-stretched community-based centers,[37] and (b) balance onerous administration and management tasks with providing instructional leadership once those practices are developed. These are critical considerations for multiple reasons. Early education leaders bring less formal training to challenging education reform and PD models than elementary or secondary principals. Time, human, and financial resource constraints can be severe within community-based centers, and job-embedded PD models can be expensive to mount given requirements to maintain teacher-child ratios and group sizes in early education. Finally, comprehensive improvement efforts that lack effective leader PD are less likely to succeed or become sustainable because leaders lack the capacities to lead and institutionalize changes.[38] Taken together, these

constraints on local capacity pose serious challenges to pursuing comprehensive interventions that transform early education centers into self-sustaining learning organizations.[39]

Yet early childhood research has begun to shed light on the potential and importance of interventions focused on leadership. For instance, center administrators' educational attainment and on-going professional training has been linked to multiple aspects of program quality, including teacher retention and job satisfaction, use of data, and rates of center accreditation.[40] And a recent study found that classrooms located in centers with a more positive organizational climate (including for example clear vision, goal consensus, task orientation, and positive relationships among teachers) were rated higher in regard to classroom structural quality.[41]

We challenged ourselves to adapt and apply the lessons and analogies from that emerging K–12 evidence in a way that acknowledged and addressed the particular and additional challenges of leadership in the early childhood sector. Research articulated for us what leaders needed to know, think, and do. Experience in the field illuminated the gap between where we were and that desired end state for high-performing early childhood settings. We set about crafting a framework for instructional leadership and improvement that would scaffold leaders through that deeply challenging and much-needed transformation.

Description of the Ounce Professional Development Intervention (PDI)

From 2012 to 2014, in partnership with Chicago Public Schools and the Chicago Department of Family Support Services, and with support from the Stranahan Foundation, The Crown Family, and a US Department of Education Investing in Innovation (i3) development grant, the Ounce of Prevention Fund designed, implemented, and refined our professional development intervention (PDI) in four community-based early learning programs serving infants, toddler, preschoolers, and their families. Our work involved 15 administrators and 60 teachers serving approximately 600 low-income, racially, ethnically, and linguistically diverse children in Chicago.

The PDI aligns the professional learning cycles of four key groups of educators—center leaders, direct supervisors, teachers, and assistant teachers—to transform centers into learning organizations collaboratively focused on excellence and on generating improvement through strong organizational conditions, including job-embedded professional learning. The PDI is grounded in a systems understanding of educational improvement and includes three core components:
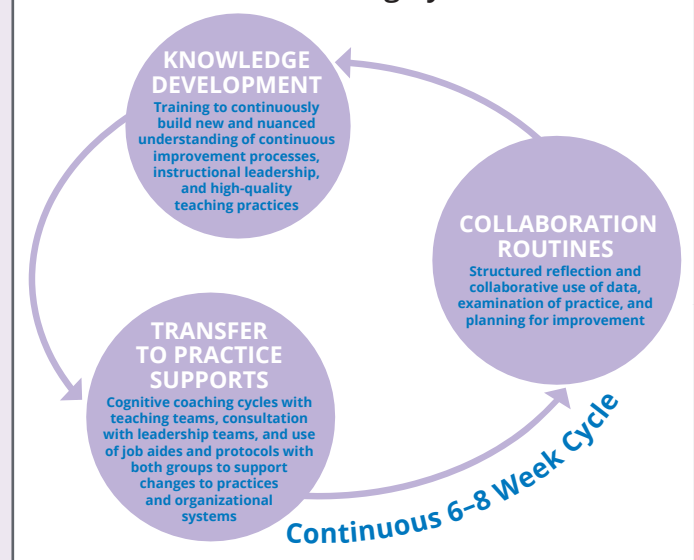
1. ***Intensive cycles of job-embedded professional learning***. These cycles develop role-specific knowledge, skills and dispositions of instructional leadership aligned to the five essential supports framework for improvement, and high-impact teaching and learning aligned to the Classroom Assessment Scoring System (CLASS) respectively.[42] These intensive cycles spanned six to eight weeks and consisted of training to build knowledge, coaching and consultation supports to transfer that knowledge to practice, and reflective practice groups to support collaborative examination of practice and planning for improvement (See Figure 4).

2. ***Center-wide systems of job-embedded professional learning*** that protect time routinely and structure teacher collaboration during the program week and month.

3. ***Job aides and protocols to shape complex work and decision-making processes***. These job aides and protocols systematize how people approach and deal with tasks associated with core practices, including center-wide decision–making, collaborative data dialogues, and lesson planning.

Job-embedded professional learning routines were the primary vehicle for advancing the knowledge, skills, and dispositions of the leaders, supervisors, and teachers during the intervention. These routines were also intended to be the vehicle leaders used to sustain gains and generate continuous learning and improvement in their centers beyond the intervention.

Our work was independently evaluated by the University of Illinois at Chicago, Center for Urban Education Leadership (urbanedleadership.org). The evaluation found that we successfully:

- Increased leaders' knowledge, skills, and dispositions with instructional leadership, including inclusive decision-making and facilitation of job-embedded professional learning that shaped a culture of collaboration, excellence, and improvement

- Established a system of instructional guidance and feedback, and weekly and monthly job-embedded professional learning routines structured by job aides and protocols

- Increased teachers' knowledge, skills, and dispositions with intentionally planning and deliberately implementing higher-quality interactions and instruction as measured by the CLASS[43]

- Realized statistically significant improvements in children's social-emotional learning and development

FIGURE 4
PDI Learning Cycle

KNOWLEDGE DEVELOPMENT
Training to continuously build new and nuanced understanding of continuous improvement processes, instructional leadership, and high-quality teaching practices

COLLABORATION ROUTINES
Structured reflection and collaborative use of data, examination of practice, and planning for improvement

TRANSFER TO PRACTICE SUPPORTS
Cognitive coaching cycles with teaching teams, consultation with leadership teams, and use of job aides and protocols with both groups to support changes to practices and organizational systems

Continuous 6–8 Week Cycle

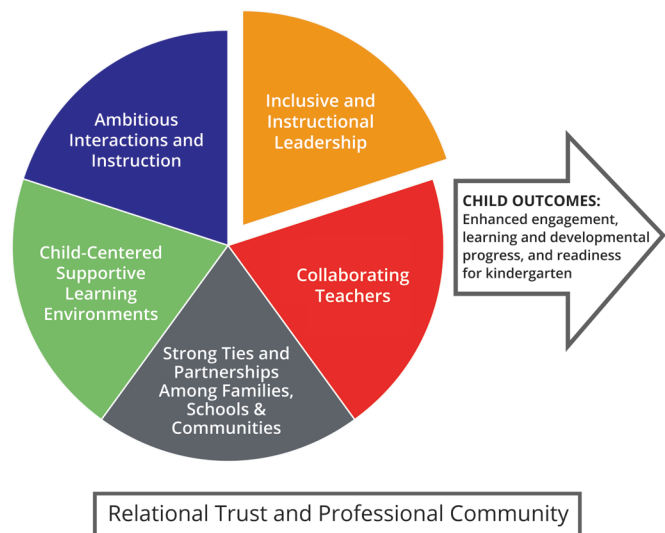# Developing Our Instructional Leadership and Improvement Framework

Our research review made clear that investments in leadership and organizations are required if the early education sector is to transition toward sustainable practices of evidence-based instructional improvement.[44] Therefore, we conceptualized and designed a professional development intervention (the PDI) that builds program leaders' foundational knowledge and core competencies in supporting and improving high-quality classroom practice for children's learning in their organizations. At the outset of the PDI, little work had commenced to translate the five essentials research into granular guidance for practitioners. Indeed, ours was among the first attempts at such a translation in any sector of urban schooling, and certainly the first to translate it in early education and to small, community-based settings. However, improvement science has also taught that "The most compelling improvement hypotheses often exist at the intersection of these 'three voices'—how does the system work; what does the relevant theory and empirical research suggest about promising changes; and what seems plausible to educators who might try out these changes in classrooms, schools, and colleges."[45] With the five essentials as our North Star, we articulated a theory of change that used two of the essential supports as entry points for strengthening all five (See Figure 5).

Inclusive and instructional leadership is the driver of change. Leaders are responsible for creating a climate and conditions supportive of teaching and continuous improvement. This includes establishing a vision for excellence, building relational trust, galvanizing staff activity in service of improvement, and providing teachers with coherent instructional guidance and time during the workday to collaborate with colleagues toward ambitious and improving practice.[46]

Collaboration among teachers is the vehicle for improvement. The way teachers work together to develop and continuously improve curriculum and instruction, emotionally supportive learning environments, and engagement of families is far

more important and predictive of achievement than any individual teacher or school quality characteristic.

FIGURE 5

The Five Essential Supports for Improving Early Education

Relational Trust and Professional Community

Those two essentials became principles of practice—leaders are the drivers of change, collaboration among teachers is the vehicle for improvement—informing every subsequent aspect of the PDI design. To implement the PDI, we returned to the takeaways from the school improvement and professional development literatures: Elevating an organization's capacity to continuously improve its performance requires far more than the traditional tact of sending various individuals—directors, supervisors, teachers and practitioners—to separate trainings specific to their role and function. It requires instead carefully orchestrated, organizationally based and sustained, collaborative experiences that help each person work more effectively within his or her current contexts of practice. It requires not just acquiring new knowledge and skills or receiving feedback from monitoring visits but also routine, deep reflection with peers to instill

new habits of thinking and action.[47] It requires a shift from compliance monitoring and externally delivered PD for individuals to a focus on developing collective responsibility and capacity with internally generating professional learning and practice improvement continuously.[48]

No one had developed an intervention specifically directed to achieve implementation of the five essentials in early education.

Clear in our underlying principles and approach to implementation, we then had to craft the substantive content of the intervention by knitting together the framework of the five essentials with the practices of effective professional development. No one had developed an intervention specifically directed to achieve implementation of the five essentials in early education. It thus became our task to translate the empirical research into an implementation framework for leaders—a road map—specifying the foundational knowledge, core practices, and dispositions of leaders in educational settings strongly organized to the essentials and for improvement.

Several steps were involved in translating the five essentials research into a professional development intervention.

1. *We adapted the K–12 definitions of each essential for fit and relevance to early education settings and practices.* Our aim was to create definitions that did not alter the constructs. Rather, we nuanced the definitions in order for them to resonate with early childhood professionals, and added details that better described the organizational processes of settings strongly organized to the essentials. Below are abbreviated adapted definitions. Please see pages 16–17 for the comprehensive adapted definitions.

Inclusive and Instructional Leaders: Center leadership is strategically focused on children's early achievement and nurtures trust and collective understanding and responsibility for excellence and improvement among staff and parents.

Collaborating Teachers: Teachers are committed to the center, build strong relationships with their colleagues, and work together continuously to improve teaching and learning.

Ambitious Interactions and Instruction: Teachers and staff provide consistently engaging, developmentally appropriate, and rigorous curriculum and instruction.

Strong Ties and Partnerships Among Families, Schools, and the Community: All staff develop strong relationships with parents and families and support meaningful partnerships with families that support children's learning.

Child-Centered Supportive Learning Environments: Centers are physically and emotionally safe and engaging environments, wherein staff hold high expectations for children's social-emotional and academic learning, coupled with nurturing, individualized supports for children and families.

2. *We assessed why these organizational conditions tend to be so weak in early childhood settings.* In brainstorming the root causes of the weaknesses, we paid attention to the various roles, relationships, processes, policies, and milieus of early education settings, especially as teachers, families, and children experience them (see Table 1 for Fishbone root cause diagrams).

3. *We determined the necessary competencies— foundational knowledge, core practices and dispositions—of leaders to address these root causes of organizational weakness.* What did they need to know about the dynamics of instructional improvement, and their role in leading it? What did they need to understand and be able to do differently in order to strengthen these organizational conditions? Given that relationships and trust are key enablers of change, what social-emotional and dispositional competencies did leaders need to strengthen in their approach? Where and how could productive changes be introduced into current systems and practices?

TABLE 1
PDI Leadership Development Fishbone Diagram

Problem statement: Early learning organizations have low success rates generating and continuously improving teaching and learning that is emotionally supportive and ambitious enough to prepare young high-needs children for later success in school and life.

Effective instructional leaders— Leaders are not providing instructional leadership that generates practice excellence and improvement overtime.

- Leaders' time is consumed by finding and keeping funding
- Distracted by multiple and competing accountability demands
- Lack of strategic focus on children's early achievement
- Striving for compliance through monitoring and directives
- Belief that best practices are the ideal. It's ok to settle for the realistic
- Belief that unilateral problem-solving and decision-making is most efficient and effective
- Lack of knowledge and skills with driving continuous quality improvement
- Don't believe it's their job to lead the instructional program and/or to ensure coherency and coordination among all the improvement initiatives

Collaborative teachers— Professional development does not support teachers' continuous learning, development and practice improvement.

- Sending educators to training is not sufficient professional development, yet still the only PD many receive
- Lack of supports to assist teachers with transferring knowledge into practice and to sustain improvements
- Minimal time to reflect, examine real and relevant problems of practice, and plan improvements
- Few opportunities to learn from others
- Ineffective supervisory systems and interactions
- Professional development efforts not coordinated, integrated or coherent in the present and over time
- PD providers ineffective
- Leaders don't believe it's their job to support teachers' professional learning and effectiveness
- Leaders lack competencies to implement job-embedded professional development

- Financial concerns supersede best-practice commitments in daily decision-making
- Don't believe best practices are realistic
- Low levels of supportive relationships
- High levels of stress and isolation
- Enrollment and transition policies disrupt relationships and undermine learning
- Low expectations for high-needs children's capacities to relate and learn
- Don't believe family-centered improves child-centered

- Lack of intentional planning and time for parent-teacher collaboration
- Don't know how to structure parent influence on programming and improvement
- Lack of social ties to each other
- Low expectations for parents' interest and capacity to support children's learning

- Belief that high-needs learners require rote skill development
- Weak pedagogy and content knowledge
- Lack of practice frameworks for decision-making
- Lack of time for data use, reflection and instructional planning
- Insufficient and incoherent practice guidance

Child-centered supportive learning environments— Leaders and teachers are not consistently creating child- and family-centered and supportive learning environments.

Strong ties and partnerships among families, schools and communities— Leaders and teachers are not engaging parents as partners in promoting children's learning and in

Ambitious interactions and instruction— Teachers are not planning and providing ambitious interactions and instruction in the earliest years.

4. *We identified tasks associated with core practices and constructed job aides and protocols that systematized approaches to those tasks.* Many tasks that occur repetitively in leaders' and teachers' work are often treated perfunctorily. We sought to increase the sophistication of thought and decision-making during those tasks in order to improve them.

5. *We targeted inclusive and instructional leadership and collaborating teachers as the essential supports to transform and strengthen first*. Improvement research on the five essentials shows that leadership is the driver of change across the other four essentials. And that although each essential plays a critical role in forming student outcomes, they are mutually reinforcing. That is, when one of the essential supports is strengthened, it buttresses the development of the other supports. Based on those empirical findings, we hypothesized that by strengthening the driver of change (instructional leadership) and the vehicle for improvement (teacher collaboration), a cascade of changes would take place that strengthen the other three supports and poise programs for improving children's learning.

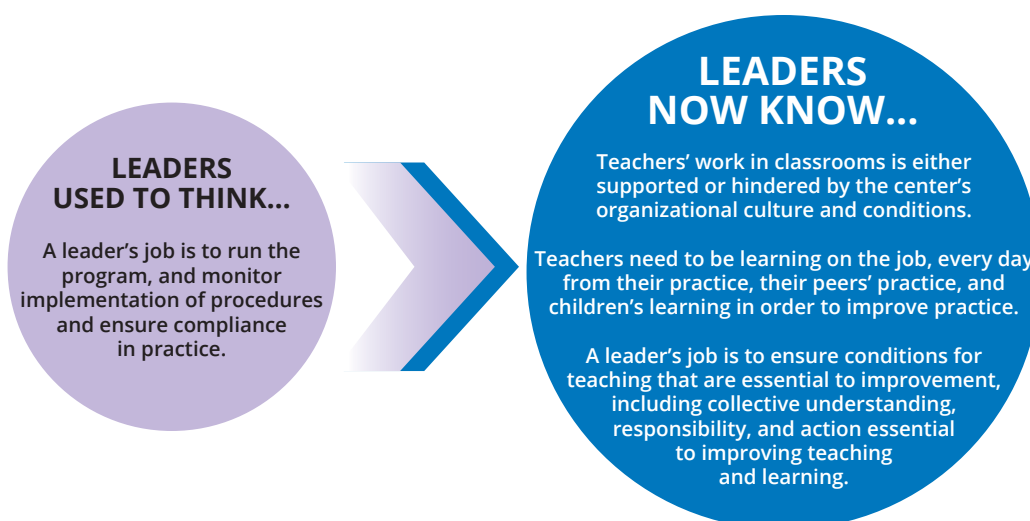In the end, we designed 12 professional development modules. Our root cause analyses helped us anticipate challenges leaders would experience in their professional learning and with transforming their practices and organizational systems. With those challenges in mind, we designed specific provocations, experiences, and activities to support leaders in cultivating the needed competencies. In summary, our five essentials-based professional development curriculum foregrounds the connection between program leadership and learning, that of children and adults, and facilitates these transformations:

a) Reconstructs leaders' understanding of instructional improvement as an organizational process they are responsible for leading

b) Cultivates leader competencies—knowledge, skills and dispositions—in the areas of inclusive and instructional leadership

c) Systematizes collaborative job-embedded professional learning in which leaders learn together with staff by facilitating ongoing cycles of inquiry, data use, and planning practice improvements

Our intervention was designed to challenge and enable leaders to do their job in a fundamentally different

FIGURE 6
Illustrations of Intended Transformations in Leaders' Knowledge, Skills, and Dispositions toward Instructional Improvement

LEADERS USED TO THINK...

A leader's job is to run the program, and monitor implementation of procedures and ensure compliance in practice.

LEADERS NOW KNOW...

Teachers' work in classrooms is either supported or hindered by the center's organizational culture and conditions.

Teachers need to be learning on the job, every day from their practice, their peers' practice, and children's learning in order to improve practice.

A leader's job is to ensure conditions for teaching that are essential to improvement, including collective understanding, responsibility, and action essential to improving teaching and learning.

way. Our aim was for the five essentials to become a conceptual framework—an internalized narrative—that guides leaders in their work to strengthen their organizations for improvement and to galvanize all activity in service of excellent teaching and learning. Five essentials-informed directors and supervisors would (1) assess their leadership decisions and actions by asking themselves and others, "Will this strengthen or weaken the supports essential for teaching, learning, and improvement?," (2) engage in a day-to-day practice of inclusive and instructional leadership that provides staff with emotional encouragement, coherent guidance, and structured professional collaboration and learning, and (3) redefine what they hold themselves accountable for as early childhood program administrators. Throughout implementation, our work was guided by these desired transformations in knowledge, skills, and dispositions. We expected, and saw unfold, a series of shifts away from prior leadership assumptions and toward new understandings of instructional improvement and professional learning, illustrated by moves from what "Leaders used to think…" to what "Leaders now know…" (see Figure 6).

The Five Essential Supports Adapted for Early Education

Inclusive and Instructional Leadership: Leaders focus strategically on children's health, learning, development and school readiness, and with actively supporting teachers to be effective in their daily work with children and families. Leaders establish a vision for child-centered supportive learning environments, ambitious teaching and learning, and partnerships with families in accomplishing that vision. They hire staff determined to continuously improve learning opportunities and outcomes for young children and families. In daily activities and interactions, leaders build and maintain mutually trusting and respectful relationships. They galvanize staff activity in service of improvement and direct resources toward a vision for sustained learning and improvement. Leaders build collective responsibility for excellence and improvement by enlisting teachers in improvement efforts and practicing shared leadership that cultivates a cadre of leaders among teachers, parents, and community members. Leaders ensure the school is managed effectively, including the facility, budget, staffing, and resources.

Routine Teacher Collaboration: Leaders use supervisory and professional development resources, performance feedback, and social resources within the staff to build their professional capacity. Leaders work together with staff to define their strategic focus and practice improvement goals, and to solve learning and implementation problems along the way. Leaders protect time for routine teacher collaboration during the work week, and facilitate those routines to ensure teachers are reviewing data, examining and reflecting on practice, and collaborating to design instruction and try out practice improvements. All staff work in collaboration to promote their own and their colleagues' professional growth. In such centers, teachers and staff are active partners in quality improvement, committed to the center and the children and families it cares for and educates, and focused on continuous professional learning, effectiveness, and improvement.

Child-Centered Supportive Learning Environments: In child-centered supportive learning environments, all adults build supportive relationships with each other and with children and their families—the most basic prerequisite for learning. In the earliest years, it is critical that children experience child-centered supportive learning environments in order to develop a positive sense of themselves, the ability to trust others, and successful approaches to learning. Leaders use resources and establish policies that ensure all adults in the school community create consistently child-centered supportive learning environments. All adults attend daily to the use of physical space, materials, daily structure and routines, continuity of care, group size and ratio to create child-centered supportive environments. All adults interact with each other and children in warm, positive ways that create a positive emotional climate allowing children to consistently feel safe, liked, able to build relationships and actively explore. Teachers are trust-worthy and responsive to children's individual emotional and intellectual needs, they hold high expectations for children's capacity to learn, and they affirm and promote children's exploration, friendships, engagement, and persistence.

Ambitious Interactions and Instruction: All adults are provided guidance that articulates the what and how of effective teaching and learning for infants, toddlers, and preschoolers. All adults endorse and use early learning and development standards and assessment information about children's progress toward the standards to design meaningful learning opportunities. Teachers reflect on and plan intentionally for their role in providing children with interactions that are emotionally supportive, organized, instructionally meaningful, and individualized to each child's needs. All adults partner with families in continuing to learn about meaningful and effective learning opportunities for children both at home and at school. A guidance system supports high-quality implementation and continuous improvement of teaching interactions, instruction, and children's learning. Structures for the implementation of curricula, assessments, and use of materials are coordinated across the program. While teachers may have substantial discretion in how these resources are used, teaching effectiveness depends on the community of practice and supervisory dialogue and feedback that supports implementation.

Strong Ties and Partnerships Among Families, Schools and Community: Children do not exist alone; they are a member of a family that lives within a community. When families, schools and communities focus collectively on children's needs, children are healthy, competent, motivated learners who realize long-term social and academic success. Early parent-school partnerships shape parents' awareness and capacity for partnering with educators and advocating for their children's needs to ensure positive experiences and success in school. Through systematic approaches, the entire staff works to build responsive, respectful relationships with families that motivate engagement and goal-oriented partnerships. Parents are partners in developing and achieving goals for their child and their family. Staff value parents' perspective and participation and are willing to be influenced by it. All staff share and seek information from families to build mutual respect and understanding. They make decisions collaboratively with parents and work cohesively across home and school to support children's participation, health, learning and development. All staff cultivate strong ties with elementary schools and actively support parents, children, and teachers to make successful kindergarten transitions. Through referrals and connections to community resources, staff work to reduce material hardships, promote well-being, and increase family capacity to engage with the children's learning and development. By building social networks among families, staff work to reduce isolation, increase social-emotional supports, and open life and learning opportunities that strengthen families and entire communities.

The Framework in Practice: Our Implementation Experience

As detailed in the description of our intervention (see page 10), we spent nearly three years implementing, studying, and refining our instructional leadership framework and intervention in four community-based, birth-to-five, early learning programs in Chicago. That implementation surfaced illuminating insights into pressing questions for our field: What does instructional leadership mean in early childhood education? What does it look like? And how do we cultivate it in early childhood settings and administrators?

In the sections that follow, we describe how the leaders internalized the five essentials as a conceptual framework and how we achieved significant growth in leaders' capacity to support and facilitate professional learning and instructional improvement.

Driving Organizational Change and Improvement Through Inclusive and Instructional Leadership: What We Did

To begin the transformation process, we built leaders' knowledge about the research on school improvement, specifically, the organizational conditions of schools that realized sustained improvement versus those that stagnated. Next, we conveyed the critical role of leadership in driving change by establishing a vision for excellence, collective responsibility, and nurturing teachers and shaping instructional practice. Most importantly, we taught leaders about the key enablers of fundamental change: strong trusting relationships and unity of purpose among all staff.

We shared the five essentials framework and evidence and then examined the adapted definition of each essential. We did close readings of each definition, contrasting those descriptions with the organizational conditions, climate, and work processes typifying their own and other early childhood settings. The framework resonated with early education leaders, but they had doubts as well.

They were skeptical that the conditions created by the five essentials could ever become reality in their settings. Leaders described constant distractions to their time and attention caused by financial instability and the need to ensure compliance to multiple accountability demands. They told us:

> The constant financial instability is demoralizing.[49]

> These supports are hopeful, but we live under demoralizing conditions.

> We have grown stagnant. We want to get unstuck. But, our focus is on just getting through the day.

They were uncertain that program leaders even played a role in several of the essentials, including ambitious interactions and instruction and child-centered supportive learning environments. At first, leaders thought about those essentials as the work of teachers and thus the responsibility of teachers to improve. We had leaders discuss how the essentials were interconnected and asked them to identify the role leaders play in facilitating each of them. We discussed examples, such as collaboration spurring teachers to support each other in ambitious instruction, which in turn makes them feel more supported and perhaps then better able to engage with children in ways that meet their emotional needs. Leaders were able to identify the myriad ways the essentials are mutually reinforcing, and, importantly, began to see the critical role they have in catalyzing those changes.

By developing leaders' foundational knowledge of improvement and grappling with their doubts, we illuminated their concrete responsibilities in creating strong organizational conditions, including:

> Establishing a vision for high-quality teaching and ambitious learning

> Cultivating a culture of collaboration, inquiry, learning, and excellence

> Providing teachers with coherent instructional guidance and alignment of assessment, curriculum, and instructional resources

> Facilitating teachers' professional learning embedded in the program and the work

> Enlisting staff in quality improvement efforts through collaborative data review and goal setting

Next, we transformed how leaders interact with teachers. The culture of compliance and directive leadership was incompatible in fostering high levels of trust, connection, and commitment. Leaders believed their role was to ensure that teachers were complying not only with health, safety, and classroom environment concerns but also with the leaders' notions of what practice should look like. Maintaining compliance was leaders' paramount priority, and being in charge was the way leaders knew how to ensure compliance. As we discussed the importance of relationships and trust, leaders were extremely skeptical about becoming less directive or ceding any control. Many feared that if they were not in control and not dictating the work, their programs would be out of compliance with procedural mandates and their funding would be at risk.

We helped leaders reflect on their interactions with staff and the mindsets underpinning their interactions. We pressed them to consider how their current approach might support or sabotage their ability to shape teaching, provide instructional guidance, or cultivate a collective sense of responsibility. For example, we asked leaders to share how and why they sought staff input. Only a few were able to provide limited examples. When probed directly about trust levels between themselves and teachers, many expressed a lack of confidence in the competence of their staff.

We juxtaposed leadership designed to achieve buy-in and staying in compliance with leadership that builds trust, a connected professional community, and shared responsibility. We examined the research that found that sustained school improvement was rarely if ever observed in the absence of high levels

of trust and community. We outlined a set of inclusive practices central to a leader's ability to catalyze change, including:

> Building trusting relationships—among leaders, staff, children and families—through authentic and transparent communication

> Encouraging the sharing of perspectives, questioning and inquiry, dialoging with data, and trial and error

> Structuring staff influence in setting policies, identifying problems, and making decisions

> Allowing practice leaders to emerge among staff

Instructional and Inclusive Leadership: The Challenges

Leaders struggled to understand why inclusivity and teacher influence was a key enabler of fundamental change. In the beginning, they tended to approach principles of trust and inclusivity as strategies to gain compliance from staff. As one leader wrote, "inclusive practice tends to help me get teacher buy-in, which saves time by preventing pushback." Leaders grappled with shifting from methods of controlling teachers to methods of sharing responsibility with teachers. This shift challenged leaders to question their attitudes toward control and whether control is the most effective conduit for building the capacity of their staff to be both responsible and competent in the work.

Leaders struggled to shift their identity toward that of an instructional leader. For instance, leaders knew they were supportive of teachers, but the essentials made it clear they needed to be supportive of the work of teaching—the actual professional responsibilities and tasks of child assessment, curriculum development, lesson planning, instruction, and partnerships with families. The essentials framework was helping them understand they needed to cultivate a professional learning community focused on teaching, talking about children's learning, and actively planning innovations to improve

practice—not just send teachers to professional development workshops. They shifted priorities away from only ensuring compliance with regulations and toward cultivating collective responsibility and children's learning.

Leaders also struggled with how to be in learning-focused relationships with teachers: how to provide coherent guidance about practice in ways that consistently pressed teachers to reflect and think critically. Some leaders grappled with desire to maintain a status of "all knowing" in the eyes of teachers. As one leader described it:

> When teachers don't have the answers, I'm real quick [snaps fingers] to say, 'Let's do this or let's do that.' I do feel it's my job, my responsibility. Teachers see me as their boss. It's hard to know you don't have all the answers when you're supposed to be in control and you're supposed to know everything.
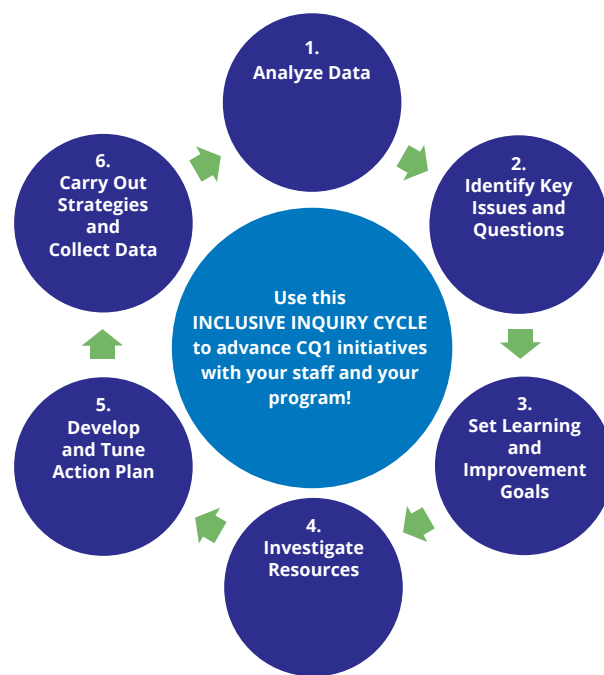
Instructional and Inclusive Leadership: The Transformations

We never asserted to leaders that accountability pressures would change. Rather, we promised leaders that they would be able to navigate accountability demands more constructively and generate improvement more effectively with the five essentials as their conceptual and decision-making frame. Through the intervention, leaders became increasingly willing to question and consider the limitations of their taken-for-granted mindset and practices. Leaders came to understand that inclusivity builds trust, which is foundational to change. Using a job aid and discussion protocol we constructed, the inclusive inquiry and decision-making cycle,[50] leaders learned how to problem solve with staff in more transparent and collaborative ways (see Figure 7). As they reduced unilateral decision-making, the influence teachers' felt over their own work increased. They internalized that seeking multiple perspectives and allowing others to exert influence is what builds trust and cultivates a professional community with a unity of purpose. Facilitating collective understanding and collective responsibility for excellence and

improvement became leaders' paramount priority:

> It has changed the conversations I'm having as center owner and director, especially with the teacher supervisors. Now when we meet, and they are letting me know, 'Oh this is what's happening in a given classroom,' I ask them more about their thinking about it. So, I don't jump to, 'Well did you do this, did you do that, and have you tried this?' It's more of like, 'Well what do you think about that?' And so I think the posture I have is different. It's more listening for where their learning is at as well with the teachers and then seeing are there maybe gaps in their understanding that I can see or is there something that we can maybe read together that can help us to understand this a little bit more?

FIGURE 7
Inclusive Inquiry and Decision-Making Cycle

We grew leaders' comfort and confidence as instructional leaders by increasing their knowledge and understanding of high-quality teaching practices and with facilitating teacher learning. First, we

deepened leaders' knowledge of the domains, dimensions, and behavioral indicators of the CLASS (Pre–K, Toddler, and Infant). This raised leaders' ability to observe and analyze teacher-child interactions. Leaders became more comfortable inquiring about teacher practice because they could confidently reference concrete dimensions of teaching from the age-specific CLASS tool. Next, we challenged leaders to evaluate the impact of their interactions with teachers by applying the CLASS lens and language to those interactions. For example, leaders began asking themselves if they were maintaining a positive climate for teacher learning? How were they regarding the teachers' perspective? And how were they providing quality feedback to teachers? Leaders' sharper grasp of the emotional, organizational, and cognitive dimensions of excellent early childhood instruction illuminated a parallel: The challenge teachers' face in calibrating their interactions for children's learning is analogous to the challenge supervisors' face in calibrating their interactions to support teachers' learning. This insight became known within the PDI as "the parallel process."

> It's a parallel process. Just as we ask teachers to do with children, we must do as well with teachers. Making sure we reflect and think about how we're speaking to the teachers, meeting the teachers where they are, being positive, encouraging their perspectives and talking together about the work.

> The only way you can really lead any of this is if you're there. One of the biggest shifts for me was really being on the ground with teachers, being in the classroom with them, experiencing what it is they're struggling with, being approachable and understanding their perspective. So I had to kind of take that old thinking of administration, 'I'm over here and teachers over here,' and stop that. But really dedicating that time to be there—present, my mind, my eyes—seeing what it is that they need, being available and kind of, well, in the work with them. I think that took me a while to get used to.

For the majority of leaders, this insight into how the CLASS lens and language was applicable to their own

supervisory work became a powerful influence that helped them operationalize how to provide instructional guidance. It allowed them to adopt a side-by-side, shoulder-to-shoulder attitude in which leaders and teachers learn together about practice and how to improve it. Leaders began to understand that seeking teacher input on policies and improvement strategies is essential to creating conditions for honest and thoughtful exchanges about problems of classroom practice and children's learning.

As the leaders appreciatively expressed:

> What I know now about my work as leader is that you can't just be the 'boss' at the table telling teachers what to do and how to do it. You must be a leader in the classroom and with teachers asking questions of why and how, asking them what they think, seeking out information and data together. Walking alongside of them and building professional community is how we will see their growth.

> It was me coming alongside of them and meeting them where they were. So talking to them individually as teachers and then together as a team as to where do they see the problem lies? Like, what is that they're having challenges with? And then making sure that things that they're struggling with, I can help support them in those things. So that's what we do, and it seems like ever since we did that, that's when we just took off from there.

Collaboration among Teachers Is the Vehicle for Improvement: What We Did

A pillar of our intervention was to support leaders in creating organizational systems that protect time—time for leaders to guide instruction and time for teachers to collaborate—during the program day, week, and month. Ideally, these collaborative times have explicit purposes, structures, and outcomes that result in professional learning.[51] This essential calls for a fundamental revision to how leaders thought about professional development, and critically,

the leader's role in building the capacity of staff in sustained and systematic ways. Leaders had always supported teachers' professional development; they would send teachers to trainings and encourage them to take college courses and achieve credentials. This essential redefines quality professional development as a sustained organizational support that continually builds professionals' capacity to improve teaching and learning. It requires programs to shift from one-off, externally provided trainings and courses to continuous, internally driven, collaborative, job-embedded professional learning.
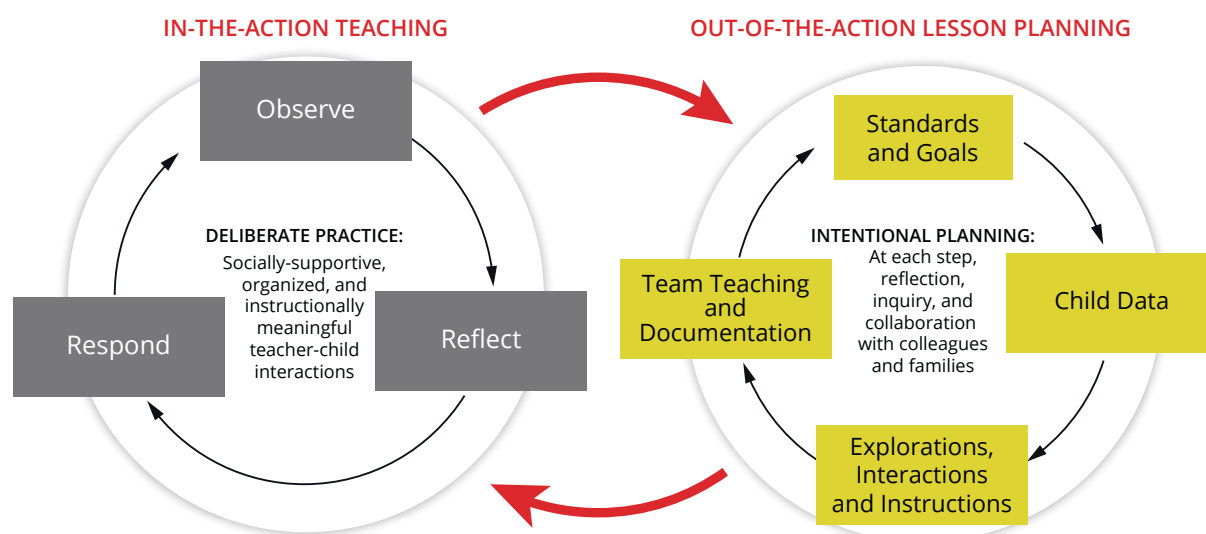
We supported leaders with fundamentally re-visioning their image of the teacher and the work of teaching. Leaders deepened respect for the competencies they were seeing in teachers and developed a strong sense of accountability for their role in actively facilitating more effective practice.

To spark this transformation in leaders' knowledge and understanding, we explored the complexities of teaching and learning. We discussed what that complexity indicates about the competencies teachers need and, importantly, what enables teachers to continually hone those competencies.[52] This surfaced the importance of de-isolating teachers and of making teaching public; that is, everything—from child assessment to curriculum development to lesson planning and preparing the environment to extending learning into the home and community—must be open to peer reflection and collaboration.[53] We reflected on how mismatched and ineffective traditional professional development is given what we now know about how teachers actually learn and improve practice throughout their careers.

We supported leaders with fundamentally revising their image of the teacher and the work of teaching. Through our PDI discussions, leaders deepened respect for the competencies they were seeing in teachers and developed a strong sense of accountability for their role in actively facilitating more-effective practice. As we explored the PDI's job aid—the focused teaching cycle[54] (see Figure 8) and corresponding protocol the weekly lesson-planning discussion guide— leaders began to visualize how the work habits of teachers could be transformed into professional learning opportunities. Leaders began to see how the time they provide teachers to "get their work done" each week could be transformed into time

FIGURE 8
Focused Teaching Cycle

IN-THE-ACTION TEACHING

OUT-OF-THE-ACTION LESSON PLANNING

Observe

DELIBERATE PRACTICE:
Socially-supportive, organized, and instructionally meaningful teacher-child interactions

Respond

Reflect

Standards and Goals

INTENTIONAL PLANNING:
At each step, reflection, inquiry, and collaboration with colleagues and families

Team Teaching and Documentation

Child Data

Explorations, Interactions and Instructions

for teachers to reflect and discuss the work with peers in order to deepen practice.

Recognizing that not all collaboration is equally effective,[55] we built leaders' knowledge of the variety of formats for teacher collaboration and the structures and facilitation skills that make those opportunities effective. We equipped them to implement teacher collaboration via data dialogues, team lesson planning, peer learning groups, and classroom observation and performance feedback. Leaders deepened their understanding of the components and processes of job-embedded professional learning that more effectively build teaching capacity. Specifically, they now understood they needed to design professional learning opportunities that are:

1. **Championed, facilitated, and sustained by school- and center-based instructional leaders** for relevant, coherent and continuous professional learning, and improvement

2. **Collaborative and within community**, so that learning and decision-making together galvanize collective responsibility, catalyze learning through multiple perspectives, and support change

3. **Routine**, so that learning opportunities occur frequently, weekly and monthly, as a sustained support for improving teaching and learning

4. **Relationship-based and strengths-based** to build respect, trust, and openness to sharing and examining practice

5. **Inquiry-based** to facilitate construction of knowledge, support problem solving, and to evoke motivation and confidence to apply learning and make changes to practice

6. **Structured by** clear measurable goals, evidence-based practice frameworks, real and relevant examples of practice, norms and protocols to ensure respectful sharing and examining of practice, focused discussions, and the identification of specific practice improvement steps

7. **Evaluated, iterated, and continuously improved** to ensure teachers are growing in their knowledge, practices and dispositions, and that those are positively impacting children's learning[56]

Collaboration among Teachers: The Challenges

Leaders in all centers gradually embraced the importance of building a coherent system of instructional guidance and supports for teachers. They came to understand the need to intentionally link teams of educators to routine, supportive, and productive collaboration. At one level, this simply involved recognizing areas of relative disarray in the daily life of the center. For example, leaders established publicly available planning calendars, set and protected time for teacher planning, and pulled together clearer manuals and policy guidelines.

Beyond more-organized routines, though, leaders were challenged to shift their role from one of enforcing compliance with top-down routines toward collaborating with teachers to cultivate these routines for their professional learning and practice improvement. They struggled to grow confident in their role facilitating teacher reflection and inquiry and with promoting practice change. One direct supervisor commented,

> I observe the patience the coaches have to really dig deeper into what the teachers really think about their classroom practices. I try to listen for the way they elicit teachers' thinking and feedback, such as, 'Is it okay if I give you this idea or suggestion?' Instead of just how I do it: 'Oh I know, go do this.' I am learning how to slow down, but it is hard.

Collaboration among Teachers: The Transformations

Leaders came to understand that job-embedded professional development is the vehicle for organizational change and instructional improvement. Teacher professional learning became embedded within the structure, schedule, and daily work of

teachers in participating centers. At the beginning of our PDI journey, leaders cited reflective supervision as the primary example of the ongoing support they provided for teachers' performance and improvement. By the end of the PDI, leaders had transitioned to a more robust understanding of the systems and practices necessary for this essential. They increased efforts to protect time for teacher collaboration within the center schedule and to interact with staff in ways that prompt teachers to think and problem solve. They strived to structure and facilitate teacher collaboration in ways that lead to professional learning and changed practices.

Through the PDI learning cycle, leaders experienced firsthand the positive impacts of peer collaboration on their own growth and motivation to change. Having a space to be asked their perspective, share practice, and engage in collaborative debate and sense making sharpened their awareness of the perils of doing complex work in isolation. Establishing routines for collaborative lesson planning, practice observation and reflection, and use of data - structured by protocols - allowed leaders to grant teachers greater latitude to experiment with varied practices that would become the focus of reflection and problem solving. Leaders' relationships with teachers evolved, pairing more teacher autonomy with a collective commitment to test and improve promising practices.

For example, a supervisor convened her teachers to plan a parent education event focused on building understanding of gross motor development. The supervisor solicited ideas for a unified approach that would gather all parents across the classrooms into one learning session, which she assumed would be easier for teachers. Several teachers counterproposed that each classroom develop demonstrations for their own parents as a way to inform and build relationships with parents. The supervisor's positive response reflects just how foundational teachers' thinking had become to her understanding of professional learning and her role in guiding instructional practice:

> So with that I can see that teachers are actually thinking, they're not like, 'Oh I just want to do this,' and then, you know, they move on. They're

really trying to figure out what's going to work. I'm sure it's going to be a trial-and-error thing. But I think for me it's the awareness they now have, and how we keep building on that awareness, about practice. In this case, how do we keep the thought of the difference between involvement and engagement with parents, and the difference between just providing an activity, as opposed to providing an activity with intent, and outcomes, and goals? I now understand that it's these embedded conversations and doing the work together.

Leaders observed how routinized learning built teachers' pedagogical knowledge and supported teachers in applying that knowledge into daily practice at higher rates than had prior professional development. Leaders grew in their enthusiasm for the intervention's job aides and protocols; they also grew in their capacity to enlist teachers in disciplined use of them. In particular, their use of protocols in key areas like lesson planning and reviewing assessment data helped reduce supervisors' anxiety about providing instructional guidance and about change processes generally. As one director noted, "Staff are more open to change, are not as intimidated by data that offers support [for making] needed changes." Leaders observed teachers asking for information, energetically discussing practice and readily connecting with peers. As teachers' professionalism and competence grew, leaders were motivated by those positive impacts to continue carving out and protecting time for routine collaboration and professional learning.

> I still find protocols hard, but I absolutely do see the purpose. I'm not a questioner. Like my mind kind of thinks very literally, so asking those open-ended questions to get to deeper thinking … well, I have to really push myself to get there. That's not something that came naturally. I really saw the protocols working when I put the effort behind it to plan and think about my facilitation ahead of time. Think about what questions I want to ask—so again, like teachers, planning is the driver to make all this happen.

From Leadership and Collaboration to Additional Essential Transformations

The PDI theory of change articulated instructional leadership as the driver of organizational change and collaborating teachers as the vehicle for improving instruction. Because the five essentials are interdependent, we expected that transformations in those two essentials would directly and positively affect the other three essentials: ambitious instruction, child-centered supportive environments, and strong ties and partnerships among families, schools and community. Indeed, we saw these transformations unfold. The other three essentials were strengthened as leaders redefined their role, challenged their assumptions, reordered their priorities, and evaluated policies and decisions through the aims and lens of the five essentials framework for improvement.

Strengthening the Essential: Ambitious Interactions and Instruction

Leaders were immediately intrigued by the idea of ambitious instruction in early childhood. We helped leaders grapple with concepts of "ambitious" and "rigorous" when referring to the education of young children. In some ways, the notion of rigor in early childhood can feel contrary to legendary principles of developmentally appropriate practice. We drove home the particular consequences of lackluster teaching for children from low-income families by reading Alfie Kohn's "Poor Teaching for Poor Children in the Name of Reform." Kohn's piece details the kind of rote instruction urban students typically receive at the expense of deep learning.[57] We put inequity on the table by asking out loud and collectively, "What is the early childhood equivalent of poor teaching for poor young children in the name of kindergarten readiness?" We pushed leaders to reflect on why weak instruction can so easily occur in any sector of education, including early education. We identified what high-quality, developmentally appropriate teaching and learning looks and sounds like with young children. We reframed rigor as something teachers engage in while planning instruction by repeatedly posing questions to evaluate the

meaningfulness of what they have planned. We asked questions like what is the purpose of this lesson, why is this important for children to learn this, in what way does this lesson help children to think and share their perspective, how will children apply or communicate what they've learned, and how will it connect to children's experiences and lives outside of the classroom?[58] Recasting early childhood interactions and instruction as a source of inequity compelled leaders to move beyond the accountability goal of merely "raising CLASS scores." It raised the stakes for instruction, making it a marker of progress not toward a higher program rating but toward giving children what's necessary for closing achievement gaps and eliminating inequity.

> **We put inequity on the table by asking out loud and collectively, "What is the early childhood equivalent of poor teaching for poor young children in the name of kindergarten readiness?"**

Leaders wanted to know more about how to support staff to grapple with ambitiousness every day for every child, and to understand ambitious instruction's role in not perpetuating inequity. We spent time deepening leaders' knowledge about key dimensions of teachers' professional responsibilities toward teaching and learning. We reviewed descriptions of CLASS domains and dimensions at high-quality levels so leaders could visualize developmentally appropriate practices at their highest impact.[59] We reviewed the PDI job aides and protocols constructed specifically to systematize lesson planning to support teaching teams with planning with greater intention and depth. We created a guide for supervisors to use when facilitating lesson planning with teaching teams. The guiding questions reduced supervisors' anxieties about how to facilitate instructional planning. Supervisors began to see that thinking should be driving what is written on the lesson planning form, rather than the form driving the thinking. Supervisors saw teachers' lesson plans increasing in rigor; that is, they were substantially goal focused

(versus activity focused), used child-progress data to individualize goals, and evidenced reflection on the specific teaching practices—what teachers would say and do within planned activities—to be used to facilitate children's learning. Supervisors grew in their comfort in using the lesson planning protocol and in being with teachers during a work process that is typically done in isolation. Teachers acknowledged that they "wouldn't have been able to learn how to plan so deeply without the support." Leaders were understanding how being an instructional leader is about being in a relationship for learning that parallels the relationship we expect teachers to be in with children for their learning.

Leaders Voices on Strengthening Ambitious Interactions and Instruction

Now it's really sitting down and planning. We do that together now with teachers. Looking at everything and how everything affects something, and how planning can help us hone down into what really needs to take place in the environment. Planning what is—what do we expect to get out of this? What is the goal? What do we want our children to learn? What do we want to see? Then, when we're on the ground, what do we as teachers need to do in order to help meet these goals? Right, it's not just planning … it's our vision and intentions.

We're really working with the teachers to help them understand how important it is to, on a consistent basis, do your documentation so that you are planning effectively. Then developing those lesson plans as a team and assigning each person to be accountable to implementing which part of the lesson. Again, it's a continuous process and how we do planning now. … We plan for teaching so learning happens.

Strengthening the Essential: Child-Centered Supportive Learning Environments

Initially, leaders thought this essential had everything to do with classroom practice and little to do with organizational and leadership practices; they assumed

it was entirely the responsibility of teachers, and that their leadership role was limited. We broadened leaders' focus beyond the classroom, turning their attention to the following statements in the adapted definition for this essential:

- All adults build supportive relationships with each other, with children and their families—the most basic prerequisite for learning.

- Leaders use resources and establish policies that ensure all adults in the school community create consistently child-centered supportive learning environments.

We first spent time reviewing literature on the significant and negative impacts of "toxic stress" on children's learning and development. That perspective allowed us to elevate warm, supportive adult-child relationships as an "intervention" needing to be implemented with fidelity by every adult in the center.

Next, we explored the myriad decisions leaders feel compelled to make daily that are not consistent with supporting staff in consistently creating supportive environments. For example, programs might feel pressure to move preschool children from one classroom to another during the day as group size changes, a decision that helps with compliance but disrupts the effort to build consistent, stable relationships. Another example: enrolling an infant who has never been bottle fed for immediate full-time care because of reimbursement requirements, a practice that makes financial sense at the expense of a carefully forged and valued parental priority. We explored ways leaders keep five essentials knowledge and beliefs aligned with their actual practices, especially under pressure and among competing priorities.

We structured a thought routine to support leaders with keeping their decisions and actions aligned to their knowledge and beliefs:

1. Recognize when you are facing a dilemma.

2. Slow down, identify the priority (having a child-centered supportive learning environment) and the

competing priority (e.g., the need to be fully enrolled).

3. Be transparent, share your dilemma.

4. Collaboratively explore options and strategies in the moment, and, later, apply the inclusive inquiry and decision-making cycle.

Leaders began to articulate the parallels between their interactions with teachers and how teachers in turn interact with children, understanding that sensitivity would beget sensitivity. They also saw inclusivity and collaboration as key to unpacking daily leadership dilemmas. The dilemmas were going to remain whenever values conflicted with regulations, policies, and procedures, but by being inclusive and working through the dilemmas collaboratively, they could begin to address the underlying conditions prompting the conflict.

Leaders Voices on Strengthening Supportive Environments

So we, actually all of the staff, did an assessment of their classroom so that we have had trainings where they had to go to other classrooms to observe and to see what the environment looks like and how to improve it. So we're really trying to work as a team, getting an understanding when we say certain things should be in your interest centers it is not because it is us saying that, but this is the research behind why that area needs to look the way it looks to support children.

I've learned and am very aware that most dilemmas we face need to be sat down and thought out with all the parties. The best practice is inclusive leadership—all have a say. Another thing is that children cannot learn if they are stressed and nontrusting. Continuity of care is the going thing, and even though there are some barriers, it is best practice for all. Best for the children, families and staff in order to provide children with a sense of trust and familiarity and for relationship building among families, teachers and children.

Strengthening the Essential: Strong Ties and Partnerships Among Families, Schools and Community

Leaders brought strong foundational knowledge to our exploration of this essential support because of the historical strength of Head Start standards and outcome frameworks in the area of family engagement. The five essentials framework contributes greater clarity about how strong organizational conditions—instructional leadership, routines of collaboration, ambitious instruction, and child-centered supportive learning environments—can deepen partnerships with parents around ambitious goal setting for children's learning and development. We focused much of our attention on how five essentials-informed leaders can better use strong assessment and planning tools like the Head Start Parent, Family, and Community Engagement Framework and program self-assessment tool to support shifts in teacher mindsets and foster deeper collaboration around parent engagement.[60]

Initially, directors and supervisors demonstrated problematic views of parents as partners, albeit in sympathetic terms: supervisors seek to "get parents motivated" while directors want to "increase parents' accountability." Similar to our approach with ambitious interactions and instruction, we surfaced multiple ways current and compliant family-engagement practice could be strengthened. We redefined Head Start concepts like "systematic" and "integrated" and unpacked the impacts of "strong partnerships" with families as intended by the five essentials.

Supervisors began to take more accountability, asking questions like, "What are some ways I can make my engagement with other leaders, teachers, and families more meaningful?" Leader reflections credited the five essentials framework for prompting these shifts:

I have realized that I need to support a shift in mindset regarding working with families. I am leaving this learning lab realizing that parents need to know they are needed and valued by us. I must help us see these relationships as doing something alongside of families instead of doing something to or for families.

They also recognized the importance of taking a systems-building approach:

> I want to explore the Head Start Outcomes Framework with staff so we can think critically about ways to improve our practice and pull in families' expertise so they want to be engaged with us.

Leaders Voices on Strengthening Partnerships With Families

> With our families, we encourage them to have a transition day into the program. Again, that's to build that trust and relationship among us. The number of parents we had doing that was like maybe 10% of parents. But now that this is our focus we have, I would say, 90% of our parents who start our program spending that time in the classroom. It has helped with the teachers getting to know the child, getting to know the parent, you know, opening up that line of communication. We had that remarkable turnaround and participation because we focused together on improving something.

> For example, what's coming up tomorrow actually, we're doing a learn-and-play with our families in each classroom, as opposed to doing it as a big huge whole side. The teachers came up with this idea; each classroom decided they wanted to do it per classroom. The reason being is to create a little more intimate relationship with the parents, and so the parents also get to know the parents that are in their room. I thought it was a great idea.

Crosscutting Transformations and Sustained Impacts: Leading, Teaching, and Learning at the End of the Intervention

We saw notable growth in leadership, teaching, and children's learning taking place in the centers as leaders focused on strengthening their organizational supports. Here, we highlight crosscutting transformations and sustained impacts.

Strengthening the Essentials: Impacts on Leaders

We saw notable growth in leaders' knowledge, skills, and dispositions, including:

- Transformed understanding of instructional improvement as an organizational process they are responsible for leading
- Improved inclusive and instructional leadership skills with regard to building trust, collective responsibility, facilitating teacher inquiry, and with galvanizing persistence with ongoing practice improvement
- Fully implemented systems for collaborative job-embedded professional learning in which leaders learn together with staff through ongoing cycles of inquiry, data use, and practice improvement

Key findings and notable reflections are summarized in Table 3.

TABLE 3 — Impacts of the PDI on Leader Knowledge, Skills, and Dispositions		
Outcome	**Evidence**	**Leader Reflections**
Transformed understanding of instructional improvement as an organizational process that leaders are responsible for through their inclusive and instructional leadership practices and systems	Leaders grew in their understanding of the impact of their leadership and organizational conditions on supporting effective teaching, children's learning, and instructional improvement.	"Inclusive leadership is the driver of change, and the vehicle of change is routines of collaboration. I understand that I have to make myself visible, available and consistently in the grind with classroom teachers. We need to be intentionally looking at and discussing classroom teaching practices and tracking children's learning in a collaborative setting to ensure change happens."
Transformed understanding of job-embedded professional learning as an essential organizational and sustained support for building teaching capacity and realizing instructional improvements	Leaders grew in their respect for the complexity of teaching, the competencies teachers need to hone, and that collaborative, job-embedded professional learning is a more effective approach than traditional professional development for improving teaching and learning.	"The only way to get improvement in teacher practice is through continuous learning. Leaders must protect teachers' time so they can reflect on the work and learn from the other teams of teachers. Leaders must exhibit trust in the teachers' ability to develop competencies to do the work. Leaders must support teachers with being intentional about producing positive outcomes for children and families. I have to build in supports (use protocols, support lesson planning, reflective practice groups, supervision dialogues, etc.) to ensure that teachers have an opportunity to process the complex work of teaching and learning."

TABLE 3 (continued) **Impacts of the PDI on Leader Knowledge, Skills, and Dispositions**

Outcome	Evidence	Leader Reflections
Protected time for collaborative, job-embedded professional learning routines	Leaders succeeded in creating a sustainable schedule for weekly team lesson-planning meetings, monthly classroom observation and dialogue, and one monthly reflective practice group.	"I really began to understand that it is our responsibility that teachers are learning and growing, and that we have to lead that. We have to provide the structure for that in order for that to happen." "Leaders must provide a structure—space, place, time—that supports teachers' continuous learning. Routines of collaboration support teachers' learning because [they] give teachers time away from the classroom to reflect on their practice, learn from their colleagues, and ask questions. When this is done regularly, they can expect and begin to depend on this type of support."
Shifted supervisor roles and reprioritized time to provide sustained supports to improve teaching	Leaders described their commitment Direct supervisors were especially challenged to ensure time was spent in classrooms and in facilitating weekly and monthly job-embedded professional learning routines. Yet, they found creative and strategic ways to redefine their roles and restructure their schedules. Center owners, agency executives, and directors supported direct supervisors in making this shift.	"But once I was made aware of this expectation for my time—OK, 25% of my time, 10 hours a week—I knew I actually had to set up a system. The system became, I allotted time to be in the classrooms and in my role as the teacher leader, then I put on a 'red apron' as a signal to other staff to not interrupt." "As a leadership team, we sat down and we have been reassigning things so that we can provide the support that we need to for teachers. And I think we are working together more as a team. Like, now we're always reflecting together, 'OK, well this didn't work and why didn't it? So let's now try this in order to help.' We are more supportive of each other to make sure we're providing teachers what they need, like, 'Oh, I realize you haven't been able to go into class XYZ this week. Is there something I can do to help with that?' You know, trying to fine-tune so that we can have a system that works." "As the executive, I need to set aside time to focus with assistants and supervisors on the work, on teaching, learning and family-engagement practice. I need to maintain a monthly meeting schedule so that I can participate along with teachers and supervisors. I will help assistants increase time they spend supporting teachers by covering their other responsibilities to protect their time as teacher leaders."

TABLE 3 (continued) **Impacts of the PDI on Leader Knowledge, Skills, and Dispositions**

Outcome	Evidence	Leader Reflections
Improved skills in facilitating adult learning	Leaders learned to ask more open-ended questions to solicit teacher insights, to problem solve together with teachers, and to express confidence in teachers' capabilities.	"I've learned new phrases that help me start a dialogue with staff about issues that arise and practices I think we can improve. Now, we understand why the coaches use the specific language they use, and we can see the benefits of that language. It creates an atmosphere of respect, collaboration and learning for all that are involved." "So oftentimes, I find myself saying, 'Now, how can I support you?' Instead of just giving them the information, it's more back and forth. Whereas before it was like me giving them directives."
Increased commitment to sustaining and strengthening the organizational supports essential to effective teaching, learning, and improvement	Leaders described their commitment to sustaining organizational supports for continuous professional learning for themselves and their staff in order to meet emerging challenges and practice-improvement needs. On the Stage of Change Scale for Early Education and Care 2.0, statistically significant increases pre- and post-PDI were observed in the leaders' self-rating regarding (a) taking action around seeking information for professional learning, (b) feeling more confident that their actions would impact children's learning, (c) feeling more empowered to overcome challenges with supporting practice change and (d) feeling supported by more than one ally within their organization.	"I believe that every year brings its own challenges. To continue to grow as an individual within a learning institution, change is inevitable. We need to be willing to look within ourselves to be effective leaders, to have confidence in our teachers to develop the competencies to do the work and to be a community of learners. Yes, we are challenged. How do we gain time for teacher learning? Now we know we must solve that together with the staff." "I am maintaining a strategic focus on strengthening the five essentials in our program. I want to continue focusing on providing the supports that enhance teacher effectiveness. I know this means building trust and strong professional learning community. This means creating a culture/climate that supports an instructional and continuous learning paradigm."

Strengthening the Essentials: Impacts on Teacher Practice

We saw notable growth in teachers' knowledge, skills, and dispositions, including:

- Improved rigor of lesson planning practices, including the design of standards-aligned, data-informed, ambitious interactions and instruction
- Improved quality of teacher-child interactions
- Increased emotional support from colleagues and increased disposition for collaboration for continuous learning and improvement
- Supportive relationships with leaders
- Increased commitment to continuous learning and improvement

Key findings and notable reflections are summarized in Table 4.

TABLE 4
Impacts of the PDI on Teacher Knowledge, Skills, and Dispositions

Outcome	Evidence	Teacher Reflections
Transitioned lesson-planning practices to be standards-aligned, data-informed, and intentionally ambitious in the identified interactions and instruction	Lesson plans were substantially goal focused (versus activity focused), evidenced by (a) identification of learning goals and objectives; (b) the use of child-progress data to individualize learning goals, and (c) identification of specific teaching practices—what teachers would say and do within planned activities—to facilitate children's learning.	"Now we think of the goals first and then the children. So it was like flipping the way we would do a lesson plan. Now, it's what do I want the kids to get out of it? What concepts am I trying to teach them? How can I break it down to the different levels that are in the classroom in order for them to grasp what I'm trying to teach them?"
Improved quality of teacher-child interactions (as measured by CLASS-PreK, CLASS-Toddler, and CLASS-Infant.)	The percent of infant, toddler and preschool classrooms at the end of the PDI providing mid-to-high levels of age-specific, high-impact, CLASS-based teacher-child interactions increased from 0% in year one to 67% in year two to 76% in year three.	"We have our vocabulary wall, not only for students, but for the teachers and support staff. I think our language, our open-ended questions, are a lot richer now because of the planning we do."
Increased emotional support and encouragement from colleagues to continue striving for excellence	Teachers described the significant emotional support and encouragement they gained from their colleagues, and how that support helps them persist in striving for practice improvement. At the beginning of the PDI, 90% of teachers reported feeling isolated and without support to make changes in their practice. By the end of the PDI, 85% of teachers reported that they were part of a professional community that supported them in making practice changes.	"But it's like when they finally lay down [for a nap], it was like, 'Oh, my God, I just want to go home.' But now it's more like, 'Okay. What can we do tomorrow? What can we do to make it better?' Especially when you see some things are working. Then it's even easier to be like, 'Okay, we can do this. We got each other's backs now.'"

TABLE 4 (continued) **Impacts of the PDI on Teacher Knowledge, Skills, and Dispositions**

Outcome	Evidence	Leader Reflections
Strengthened disposition for being a member of a professional learning community that examines practice and learns together	Teachers described how much they learned from their colleagues during team lesson-planning meetings and reflective practice groups.	"The conversation, the interaction, just being able to bounce ideas off of each other. That really gave us a way to say, 'Oh, yeah, I could do that. Why didn't I think of that?' I think because we were so isolated and doing things kind of independently, that being able to come together and dedicate that little piece of time to just have those conversations. That's most valuable in terms of thinking of things that you wouldn't have thought of by yourself."
Increased support from leaders	Teachers described how their leaders and supervisors now know more about what is happening in their classrooms and about their teaching challenges, and are now more responsive to their needs as they work with children and families.	"You might feel like they're not on your side. … But I don't feel like that anymore. … They hear the troubles you have, and they've learned, or I should say, they've started to help more there. They are very much more attentive to what we need as far as working with the children and the families."
Increased readiness and commitment to make practice changes that improve children's learning	On the Stage of Change Scale for Early Education and Care 2.0, statistically significant increases (pre- and post-PDI) were observed in the teachers' self-rating regarding (1) awareness of the changes they need to make, (2) actively making those changes, (3) thinking about how to keep up changes they made, and (4) viewing themselves as a "true professional" because they often make changes to practice.	"I can't go back to my old ways. Because of what I've learned, to be the professional that I am now, when it comes to working with families, children and co-workers. I now know things that I did not know before about being present and intentional in my work for the children and families."

Strengthening the Essentials: Impacts on Children's Learning

We saw notable growth in the learning and development of children enrolled in the PDI centers and classrooms. As leaders developed a more inclusive, strengths-based approach to their relationships with teachers, the teachers then also interacted with children in a more positive and organized way. When we studied child-level impacts, we saw the indirect impact of leaders' developing a more emotionally supportive and collaborative environment for teachers. In particular, the PDI had positive impacts on closing the gap in social-emotional learning and development for those children with two years of exposure to the PDI. Given that two of our aims were to transform leaders' relationships with teachers and to advance teachers' pedagogical knowledge (including knowledge of social-emotional development), these results reflect the PDI's effectiveness in supporting instructional practice. The best learning occurs within a context of supportive relationships that make learning engaging, meaningful, and challenging—something we found to be true for adult and child learners alike.

Conclusion: Embracing Instructional Leadership as the Driver of Improvement

The PDI deepens leaders' understanding of how programs actually improve teaching and learning. It focuses leaders' attention on cultivating strong organizational conditions that support teaching. It replaces traditional disjointed professional development with program- and job-embedded collaborative professional learning. It motivates leaders to expand their identity beyond "running the program" and toward those of an instructional leader—a leader whose day-to-day practices provide teachers with the relationships, guidance, conversations, and collaboration that generates professional learning and practice excellence and improvement.

Efforts like ours, however, did not and cannot fully address the larger conditions—such as inadequate and disjointed funding and burdensome and complex compliance demands—that contribute so mightily to the challenges programs face in their efforts to improve teaching and learning. These essential sustained supports and the instructional improvement that flows from them are far more likely to thrive when the underlying context of the program, the center/school, the community, and the early childhood system are adequately strong and well resourced.[61] Our PDI, and comprehensive improvement efforts like it, could be successfully implemented in many more programs if there were a concerted effort to thoughtfully align program metrics and child outcomes to structural supports—and if leadership competencies and the essential conditions for improvement were kept at the forefront of conversations about what gets measured, funded, and supported.[62]

The more we explored the essential supports, all the while emphasizing inclusive leadership practices as a primary driver of change, the more leaders co-constructed a systems understanding of improvement and their essential role in leading it. They shifted from striving for buy-in and compliance to cultivating collective understanding that ignites collective attention, action, and responsibility for improvement. They began to aspire to lead something greater than compliance. They began to know that together with their staff they could strive for excellence.

Our vision was prescient, and our work was timely. In 2015, one year after we concluded our work to design, develop, refine, and independently evaluate the PDI, the Institute of Medicine and the National Research Council released its seminal report, "Transforming the Workforce for Children Birth through Age 8: A Unifying Foundation." Two of the 13 recommendations specifically target early childhood program leaders, including that the field specify knowledge and core competencies leaders need to support high-quality practice in their organizations, and establish revised leadership standards, especially in the area of instructional leadership. This is what the PDI was designed to do and what promising evidence demonstrates it was able to accomplish.

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